3. HOW DO I MANAGE THE WASTE I GENERATE?

As a rural electric cooperative, you may generate various types of wastes including office trash, vehicle maintenance wastes, used utility poles, etc. As the waste generator you a re responsible for all steps in managing those wastes from generation to final disposal. It is important that you manage the wastes properly to protect yourself, your coworkers, others in your community, and the environment.

RESOURCE

This section contains some technical language, so if you have questions, please call your statewide association, cooperative lawyer, state environmental agency (see resources section), or the EPA RCRA hotline at 1-800-424-9346.

What is RCRA?

The Resource Conservation and Recovery Act (RCRA), passed in 1976, by the U.S. Congress, contains the Federal requirements for managing and disposing of solid and hazardous wastes (see box). Subtitle C of RCRA contains the regulations for the generation, storage, transportation, treatment and disposal of hazardous waste. Subtitle D of RCRA regulates solid waste. All of the Federal hazardous waste regulations are located in Title 40 of the Code of Federal Regulations (40 CFR) Parts 260 to 299.

This chapter provides an overview of the Federal regulations for managing the wastes your cooperative generates. It is organized to answer the following questions:

- Are any of the wastes I generate hazardous?
- What waste management regulations apply to my cooperative?
- How do I comply with waste management regulations?

USEFUL TIP

Many states have their own waste management requirements based on the Federal regulations. In some of these states the regulations are the same as the Federal regulations. Other states have developed requirements that are stricter than the Federal requirements. If your state has such requirements, you must comply with them.

The aim of this chapter is to give you a basic understanding of your waste management responsibilities. However, it is not a complete description of all waste management regulations because it does not include any of the state requirements which can be stricter than the Federal requirements (see box). To become familiar with your state's requirements, consult your state hazardous waste agency.

3.1 ARE ANY OF THE WASTES I GENERATE HAZARDOUS?

Definition of solid and hazardous waste

The answer to this question is complex and requires you to follow several steps. First you must determine what types of wastes your cooperative generates. RCRA defines two types of waste, solid and hazardous. Hazardous waste is a subset of solid waste (see box). If your waste does not meet the definition of solid waste, it will not be hazardous waste by definition.

DEFINITIONS

The definition of ***solid waste*** under RCRA is discarded material, including material that is abandoned, recycled or inherently waste-like. ***Hazardous waste*** is solid waste that is listed in the RCRA regulations as hazardous, or is defined by its hazardous characteristic.

Hazardous waste vs. hazardous material

It is important to understand the difference between hazardous materials (also called hazardous substances) and hazardous wastes. Various Federal regulations, such as the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Emergency Protection and Community Right-to-Know Act (EPCRA) (see Chapter 6), and the Hazardous Materials Transportation Act (HMTA) (see Chapter 4), contain lists of chemicals that are considered hazardous materials. Hazardous materials do not have to be wastes in order to be covered under those regulations.

USEFUL TIP

The HMTA contains regulations for transporting hazardous wastes and hazardous materials. These requirements are discussed in Chapter 4.

EXAMPLE

A drum of methyl ethyl ketone (MEK) being stored in your cooperative's warehouse is a hazardous material under EPCRA regulations, but it is not a hazardous waste under RCRA because it is not a waste. If the MEK becomes contaminated during storage and cannot be used, it becomes a waste, and, because it is on one of the RCRA lists (see Section 3.1.3), becomes a hazardous waste.

The RCRA regulations, however, only address wastes (i.e. materials to be discarded) regardless of whether they are hazardous or not. Hazardous wastes also are defined in DOT regulations as a subset of hazardous materials (see Chapter 4).

3.1.1 What Is Solid Waste?

The definition of solid waste is so broad that most materials you dispose of fall within it (see box). However, there are a number of disposable materials that are ex cluded from the definition of solid waste (and thus hazardous waste).

EXPLANATION

Solid waste is not necessarily just a solid item. Solid waste under RCRA can be a liquid, a solid, a semi-solid, or a contained gas.

Exclusions from solid waste definition

The following materials are excluded from the definition (in RCRA) of solid waste:

- Domestic sewage, and any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly owned treatment works (POTW) for treatment. "Domestic sewage" means any untreated sanitary wastes that pass through a sewer system. See Chapter 8 for a discussion of disposal of these wastes.

- Industrial wastewater discharges that are point source discharges (i.e., they are discharged from a single point or pipeline, see Chapter 8) and are regulated under section 402 of the Clean Water Act (CWA). This exclusion only applies to the actual point source discharge. Industrial waste waters that are being collected, stored, or treated before discharge are not excluded, or are sludges that are generated by industrial wastewater treatment. If you are treating your own wastewater, the sludges are considered solid waste, and could be hazardous waste.

There are a number of other materials excluded from the definition of solid waste, but cooperatives do not ordinarily generate those kinds of materials.

3.1.2 What Is Hazardous Waste?

Once you have determined that your material to be disposed is solid waste, you then must determine if it is hazardous. Activities you typically perform at your cooperative such as vehicle maintenance or repair, vehicle refueling, equipment service and repair, spill cleanup, and managing pesticide

USEFUL TIP

Common materials you could be using at your cooperative which typically are hazardous waste when you are ready to dispose of them include solvents, cleaning products, herbicides, pesticides, and wood preservatives. PCB waste is not a hazardous waste unless it is a mixture of a PCB waste and a hazardous waste (like PCB-contaminated transformer oil mixed with a solvent). PCB waste is regulated under TSCA, and the PCB rules. These rules are discussed in Chapter 2.

application residues may generate hazardous wastes. So if you perform any of these activities, you may be generating hazardous wastes. Hazardous wastes may also be generated during power production operations at generation and transmission cooperatives but these will not be discussed in this document. Information on management of those wastes can be obtained from other EPA documents listed in Section 3.5.

For a waste to be classified as hazardous, either it is:

- On one of the four lists of hazardous wastes included in the RCRA regulations (this is called a "listed waste," see Section 3.1.3),
- It has one or more hazardous characteristic (this is called a "characteristic waste," see Section 3.1.4), or
- It is a ***mixture*** of a listed hazardous waste and other wastes. It is important to note that wastes that are mixtures that include hazardous wastes are regulated as hazardous waste regardless of the proportions of the mixture (see Section 3.1.5).

Sections 3.1.3 and 3.1.4 should assist you in determining if your wastes are listed or characteristically hazardous. It is important to note that some wastes that could be considered hazardous are exempt from the definition of hazardous waste (See Section 3.1.6).

USEFUL TIP

The label or material safety data sheets (MSDS) for the chemical or item to be disposed often will tell you whether it is a hazardous waste when it is disposed.

3.1.3 How to Use the Lists to Identify a Hazardous Waste

RCRA regulations (at 40 CFR Part 261.31 through 261.313) contain a set of four lists of wastes that are deemed hazardous. Currently, more than 400 wastes are on these lists. Wastes are ***listed*** as hazardous because they are known to be harmful to human health and the environment when not managed properly. Even when managed properly, some listed wastes are so dangerous they are called acutely hazardous wastes. Examples of acutely hazardous wastes include wastes generated from some pesticides that can be fatal to humans even in low doses.

Each list represents a different category of hazardous wastes. The categories are de fined by the source of the waste. Each category has a

different alphabet letter (K, F, U, and P). Each specific waste on a list is assigned a 4-digit code that starts with the alphabet letter followed by three numbers.

K-listed wastes are generated by specific types of processes, so it is unlikely that your cooperative generates any K-listed wastes.

F-listed wastes are from nonspecific sources. Many solvents such as toluene, xylene, and MEK become F-listed wastes after they have been used.

HOW TO READ THE LISTS

When you look at the F and K lists, the waste code is in the left-hand column. The middle column describes the waste. You must read these very carefully because the descriptions are very specific. The third column lists the code for why the waste is included on the list (T means toxic, I means ignitable, etc., H means the waste is an acutely hazardous waste). When you look at the P and U lists, the code is in the left-hand column, the chemical abstracts service (CAS) registry number is in the middle column, and the chemical name is in the right-hand column. If the chemical is listed for anything other than toxicity, that code also appears in the right-hand column.

U- and P-listed wastes are discarded **unused** commercial chemical products with the listed chemical name, or products where the listed chemical is the sole active ingredient. U- and P-listed wastes include off-specification materials, container residues, and spill residues. For example, a 5-gallon bucket of the herbicide 2,4-D that has rusted and the contents can no longer be used, would be an example of a U-listed waste (hazardous waste code U240). Used formulations of U- or P-listed wastes would be hazardous wastes under another list, or be characteristic hazardous wastes as described below.

A listed hazardous waste remains a hazardous waste, even if you spill it or mix it with something else.

3.1.4 How to Determine if the Waste Has a Hazardous Characteristic

A waste is characteristically hazardous if it is ***ignitable*** (it catches fire under certain conditions), ***corrosive*** (it corrodes metal or has a very high or low pH), ***reactive*** (it is unstable and explodes or produces toxic fumes, gases, and vapors when mixed with water or under other conditions such as heat or

RESOURCE

If you think your waste has one of the hazardous characteristics but you are unsure, you can call the EPA RCRA hotline at 1-800-424-9346, or the Chemical Referral Service Hotline at 1-800-262-8200. The Chemical Referral Service Hotline is provided by the National Chemical Manufacturers Association. In addition, NRECA or your statewide association may be able to assist you.

pressure), or ***toxic*** (it is harmful or fatal when ingested or absorbed or leaches toxic chemicals into the ground when disposed of on land). These characteristics can be found in the regulations at 40 CFR 261.21 to 61.24. If your waste has any of these characteristics, it is a characteristic hazardous waste.

Use MSDSs to determine if the product you are disposing has a hazardous character-asdic

Consult the MSDS for the product that you are discarding to help determine if, as a waste, it has any of these hazardous characteristics (e.g., reactivity, ignitability, toxicity, or corrosivity). You can determine if your material to be discarded is toxic by having it tested at an analytical laboratory using the toxicity characteristic leaching procedure (TCLP). A characteristic hazardous waste remains a hazardous waste as long as it displays the characteristic (see box).

USEFUL TIP – TREATING CHARACTERISTIC HAZARDOUS WASTE

Generators (see Section 3.2) may treat characteristic hazardous wastes to remove the hazardous character (in any way except by thermal treatment) in accumulation tanks or containers. The treatment must be completed within the storage time requirements for the waste, and the tanks or containers must be managed according to the save storage practices discussed in Section 3.3.3 (51FR 10146, pg. 10168, March 24, 1986).

3.1.5 The Mixture Rule

If a listed hazardous waste is mixed with other wastes (such as pouring spent listed solvents in the dumpster) or mixed with product material (such as a material containing chemicals that would be listed hazardous wastes if discarded, spill cleanup material, or spill-contaminated soil), and the ensuing mixture is then disposed of, the mixture is considered a hazardous waste. Cooperatives that unintentionally or knowingly mix listed hazardous waste with other materials may dramatically increase the amount of hazardous waste that must be disposed.

Mixtures of characteristic hazardous waste and other wastes remain hazardous, unless the mixture no longer displays the characteristic. For example, waste gasoline-soaked rags could be characteristically hazardous wastes because the waste gasoline met the characteristic of ignitability and the characteristic of toxicity (because of the amount of benzene present in the gasoline). If the gasoline-soaked rags do not meet these characteristics, however (or other hazardous waste criteria), the rags do not have to be managed as hazardous waste.

3.1.6 Wastes Excluded from Hazardous Waste Regulation

Some wastes are excluded from the definition of hazardous (and therefore, solid) waste. Types of excluded wastes that would be of interest to cooperatives include:

- Household waste, which is any material which has been generated in a residence and typically generated by a consumer in the household during daily tasks. Household wastes maintain this status throughout collection, transportation, storage, treatment, disposal, recovery or reuse. "Households" include single, and multiple residences, hotels and motels, and campgrounds.

- Solid wastes generated by the growing and harvesting of agricultural crops and/or the raising of animals, including animal manures, and which are returned to soils as fertilizers.

- Fly ash waste, bottom ash waste, slag waste, flue gas emission control waste, generated primarily from combustion of coal or other fossil fuel, except as provided by 40 CFR § 266.112 for facilities that burn or process hazardous wastes.

- Discarded arsenically-treated wood products (i.e., utility poles) which fail the TCLP test (see Section 3.1.4) for hazardous waste codes D004 through D017 (see Section 3.1.3) and which are not hazardous waste for any other reason. This exemption is only applicable if the wood products to be discarded are generated by persons who use them for their intended end use (i.e., cooperatives discarding arsenically treated utility poles).

- Petroleum-contaminated media and debris that fail the TCLP test for toxicity and are subject to underground storage tank (UST) Corrective Action regulations under 40 CFR Part 280 (see Chapter 5).

- Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioners, provided the refrigerant is reclaimed for further use.

- Used motor oil to be recycled, unless it is mixed with a hazardous waste. However, used motor oil has its own set of rules for management and you should be familiar with them (see Section 3.4 for additional information).

- Non-terne plated used oil filters, which are not mixed with listed hazardous wastes, if the filters are gravity hot-drained through one of the following methods:

- ✔ Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;
- ✔ Hot-draining and crushing;
- ✔ Dismantling and hot-draining; or
- ✔ Any equivalent hot-draining method that will remove the used oil.

Contact the oil filter manufacturer to determine if they are terne-plated.

Samples of solid waste, water, soil, or air collected for testing to determine their characteristics or composition are excluded from some regulations during storage or transportation to and from a laboratory. Samples collected for the purpose of treatability studies are exempt during storage or transportation or while undergoing treatability studies at laboratories and testing facilities.

There are other wastes excluded from the definition of hazardous, but cooperatives generally would not generate these wastes in their normal course of activities.

3.2 WHAT ARE THE WASTE MANAGEMENT REGULATIONS THAT APPLY TO MY COOPERATIVE?

To determine which Federal hazardous waste regulations apply to your cooperative, you must first determine your generator category. EPA defines three categories of hazardous waste generators depending on the quantity of hazardous and acutely hazardous wastes generated. These categories are:

Hazardous waste generator categories

- Conditionally exempt small quantity generators (CESQGs) that generate less than 220 lbs (100 kg) of hazardous waste per calendar month and less than 2.2 lbs (1 kg) per month of acutely hazardous wastes, and never store more than 2,200 lbs (1,000 kg) for any period of time.

- Small quantity generators (SQGs) that generate 220 to 2,200 lbs (100 to 1,000 kg) of hazardous waste and up to 2.2 lbs (1 kg) per month of acutely hazardous wastes per calendar month and never store more than 13,228 lbs (6,000 kg) for any period of time.

- Large quantity generators (LQGs) that generate more than 2,200 lbs (1,000 kg) of hazardous waste per month and/or 2.2 lb (1 kg) of acutely hazardous waste per month.

3.2.1 How Do I Determine My Cooperative's Generator Category?

You must determine how much waste you generate in order to decide which category you are in. It is important that you measure only the amount of ***hazardous and acutely hazardous waste*** you generate ***each month***. These include:

USEFUL TIP

Many hazardous wastes are liquids and are measured in gallons, not pounds. To approximate the number of pounds of liquid you have, multiply the number of gallons by 8.3 (because a gallon of water weighs 8.3 pounds, and many liquids have a density similar to water). Most MSDSs list the density or specific gravity of the product, also.

What to measure

- Wastes that accumulate on your property before disposal or recycling for any period of time during the month,
- Wastes that were packaged and transported away from your cooperative during the month without being accumulated first (do not count wastes packaged and transported during the month, if they accumulated during previous months, or if they were already counted as wastes that accumulated during the month),
- Hazardous wastes placed directly in a regulated treatment or disposal unit at your cooperative without being accumulated first,
- Waste generated as still bottoms or sludges and removed from product storage tanks.
- Solvents generated from a parts washer, even if you have a contract with an outside company to manage those solvents. Your cooperative is still considered the generator of the waste solvents, and you must include them in your monthly totals.

Be careful not to double count your wastes. For example, if you shipped the waste off your facility for recycling or disposal within the month it accumulated, do not count it both as waste accumulated and waste transported.

What not to measure

Do not measure any wastes listed in Section 3.1.6 as exempt. Also, do not measure any of the following items:

- Wastes that might be left in the bottom of containers that have been thoroughly emptied through all conventional means such as pouring or pumping, and that no more than 2.5 cm (1 in) remains in the container

- Residues in the bottom of tanks storing products (such as fuel, solvents, unused motor oil) while the unit is in operation

- Any materials while they are managed immediately upon generation in a totally enclosed treatment unit, an elementary neutralization unit, or a wastewater treatment unit. Once these wastes are removed from the unit and stored they must be measured, however.

- Wastes (such as solvents or contaminated antifreeze) that are reclaimed continuously on site, as long as the wastes are not stored before being reclaimed. If you reclaim your solvents on site, and have a system for doing this that does not require the solvents to be removed from the system, you do not have to count them. If you have an antifreeze recycling system on site that connects directly to the vehicle, and places the recycled antifreeze back into the vehicle from which it came, do not count the antifreeze.

USEFUL TIP – SOLVENT RECYCLING

Solvent still bottoms, or residues from any on-site recycling are hazardous waste, and must be counted for determining generator status.

- Waste oil that meets the criteria for used oil (see Section 3.4.4) and is to be managed and handled as used oil.

- Batteries, pesticides, and mercury thermostats which fall under the universal waste rule (see discussion on universal waste rule, below), or lead-acid batteries to be recycled.

- Waste or off-specification chemicals, such as P or U-listed wastes, that used directly as ingredients in another manufacturing processes (i.e., you are selling the chemical to another manufacturer who can use it in their manufacturing process).

- Solvents that remain in a parts washer and are not removed as a waste.

3.2.2 What Is the Universal Waste Rule?

EPA issued the Universal Waste Rule in 1995 as an amendment to RCRA. It provides an alternative and less stringent set of management standards to those in 40 CFR parts 260 through 272 for three specific, but widely generated types of wastes that potentially would be regulated as hazardous.

USEFUL TIP

The universal waste rule is less stringent than existing RCRA regulations. Because of this, some states have not adopted it. Check with your state to see if it has. As of November 6, 1996, 27 states had adopted the universal waste rule standards, and 9 had proposals pending for adopting it. Also, some states include more than just batteries, mercury thermostats and pesticides in their definition of universal waste.

Under the rule, universal wastes include:

- ***Batteries*** that are spent, that will not be reclaimed or regenerated either at your cooperative or at a battery recycling/reclamation facility (under 40 CFR Part 266 Subpart G). Spent alkaline batteries are not typically hazardous waste and do not have to be managed as hazardous or universal wastes. Types of spent batteries your cooperative may generate that would be universal wastes include those in electronic equipment, mobile telephones, portable computers, and emergency backup lighting (see box, lead-acid batteries). If you are sending your spent lead-acid batteries to a reclaimer or regenerator, you may manage them according to the requirements in the universal waste rule, rather than according to the more stringent RCRA hazardous waste management requirements.

USEFUL TIP – LEAD-ACID BATTERIES

Spent lead-acid batteries can be managed either as universal waste or, if you know you will recycle or reclaim the batteries, according to specific requirements (in 40 CFR 366 Subpart G) for lead-acid batteries to be recycled (or reclaimed). It is recommended that you plan to recycle/ reclaim your spent lead-acid batteries (rather than dispose of them), and manage them according to the requirements in 40 CFR 266 Subpart G because these requirements are even less stringent than the universal waste management requirements.

- ***Pesticides*** that have been suspended or canceled including those that are part of a voluntary or mandatory recall under FIFRA (Section 19b) or by the pesticide registrant; are unused but managed as part of a waste pesticide collection program; or are obsolete, or damaged. Pesticides that are not solid wastes or are not hazardous wastes are excluded as are recalled pesticides and

recalled products managed in compliance with 40 CFR Section 262.70 (which addresses pesticides disposed of on the farmer's own farm according to the directions on the pesticide label, and the container is triple rinsed as required in the regulation).

- ***Mercury thermostats*** including temperature control devices containing metallic mercury. The ampules containing the mercury in these thermostats also can be considered universal waste if they are removed from the thermostat according to very specific requirements in the universal waste regulations. However, removing the mercury ampule can cause it to break and release the mercury, making you liable for a mercury spill and associated cleanup materials. In addition, removing the ampule makes the thermostat useless. Therefore, it is recommended that the entire thermostat assembly be left intact, and managed and disposed as universal waste. Thermostats that do not contain mercury are excluded.

The Universal Waste rule establishes requirements applicable to four types of universal waste generators or collectors. Two types apply to rural electric cooperatives: small quantity handlers of universal waste (SQHUW), and large quantity handlers of universal waste (LQHUW). Handlers include persons who generate or create such waste, as well as those who receive universal waste from others and consolidate it before sending it to other handlers, recyclers, or treatment/disposal facilities.

SQHUWs include those that accumulate less than 5,000 kilograms of universal wastes. LQHUWs are those that accumulate 5,000 kilograms or more of universal wastes. The other two types are transporters, and destination facilities. Specific requirements of the universal waste rule can be found at 40 CFR Part 273. Compliance with the universal waste rule is discussed in Section 3.4.3.

3.3 HOW DO I COMPLY WITH THE WASTE MANAGEMENT REGULATIONS?

Each category of hazardous waste generator (not to be confused with universal waste handler) must comply with the hazardous waste rules specific to that category (discussed below). Most cooperatives are either CESQGs or SQGs. Generation and transmission facilities may be LQGs. Only the requirements of CESQGs and SQGs will be discussed in this document. If you believe you are an LQG, you must refer to other documents for detailed information on your compliance requirements.

Depending on your activities, you might be regulated under different rules at different times. If, for example, you generate less than 220 lbs (100 kg) of hazardous waste and less than 2.2 lbs (1 kg) of acutely hazardous waste during one month, you would be considered a CESQG for that month, and your waste for that month would be subject to the hazardous waste management requirements for CESQGs. If, the next month, you generate between 220 and 2,200 lbs (100 to 1,000 kg) of hazardous waste, your generator status would change from CESQG to SQG and your waste would be subject to the management requirements for SQGs.

USEFUL TIP

In many cases, businesses that fall into different generator categories at different times choose to satisfy the more stringent requirements to simplify compliance.

3.3.1 What Are the Compliance Requirements for CESQGs?

You should consider your cooperative a CESQG if you consistently generate less than 220 lb (100 kg) of hazardous wastes per month, and less than 2.2 lb (1 kg) of acutely hazardous waste per month. As a CESQG, your compliance requirements are quite simple. There are three basic waste management requirements that apply to CESQGs. These requirements are:

- Identify your hazardous and acutely hazardous wastes and know which wastes you generate are hazardous.

- Do not generate more than 220 lbs (or 100 kg) per month of hazardous waste or more than 2.2 lbs (1 kg) per month of acutely hazardous wastes [this includes any wastes you shipped off your cooperative (for disposal) during that month]; and never store more than 2,200 lbs (1,000 kg) of hazardous waste or 2.2 lbs of acutely hazardous waste for any period of time.

- Ensure proper treatment and disposal of your waste.

For CESQGs, proper treatment and disposal of hazardous wastes are fairly simple. It involves ensuring the waste is shipped to one of the following facilities (see Chapter 4 for information on preparing your waste for shipping), or if you treat (e.g., solvent distillation) or dispose of your hazardous waste at your cooperative, ensure that your disposal facility is :

- A state or federally regulated hazardous waste management treatment, storage, or disposal facility (if your waste is hazardous).

- A facility permitted, licensed, or registered by a state to manage municipal or industrial solid waste.

- A facility that uses, reuses or legitimately recycles the waste (or treats the waste prior to use, reuse or recycling).

- A universal waste handler or destination facility subject to the universal waste requirements (if you choose to follow the universal waste requirements, which you are not required to do as a CESQG - see below).

You must comply with these requirements to retain your CESQG status, and remain exempt from the more stringent hazardous waste regulations that apply to SQGs and LQGs. However, it is recommended that you follow the waste storage and handling requirements for SQGs (provided in Section 3.3.2), to minimize the possibility of any leaks, spills or other releases that potentially could cause economic hardship to your cooperative.

CESQG Self-transporting of Hazardous Wastes

CESQGs are permitted to transport their own wastes to the treatment or storage facility, (whereas SQGs and LQGs must use a licensed, certified transporter). While there are no specific RCRA requirements for CESQGs who transport their own wastes, DOT requires all transporters of hazardous waste to comply with all applicable DOT regulations. In addition, DOT regulations require that all transporters of hazardous waste that qualify as a DOT hazardous material (see Chapter 4), including CESQGs, comply with EPA hazardous waste transporter requirements, found in 40 CFR Part 263. Both EPA and DOT transportation requirements are discussed in Chapter 4.

3.3.2 What Are the Compliance Requirements for SQGs?

If you determine, based on the amount of waste you generate, that you are an SQG, you must comply with the following requirements:

USEFUL TIP

Your state environmental protection agency can help you determine whether your cooperative is an SQG, and can answer your questions about quantities to count.

- Obtain a 12-character EPA Identification number (if you have not already done so). EPA and states use these numbers to monitor and track hazardous waste activities. You will need to use

your identification number when you send waste off site to be managed.

- Comply with monthly generation and maximum onsite accumulation limits.
- Follow the storage and handling procedures required by EPA for SQGs.
- Follow EPA requirements for access to communications or alarms, access to and testing and maintenance of emergency equipment, and emergency arrangements with local authorities (see Section 3.3.4).

How Does My Cooperative Obtain an EPA Identification Number?

First, contact your state agency to determine if you need an EPA Identification Number. If you do, obtain a copy of EPA form 8700-12 "Notification of Hazardous Waste Activity;" your state should provide this. With the form you will receive a booklet that contains instructions on how to complete the form, and information on how to identify your waste. Fill in the form completely. To complete item IX on the EPA form, you will need to identify each hazardous waste by its EPA hazardous waste code (see Section 3.1.3). You must complete one copy of the form for each business site where you generate or handle hazardous waste(s). Each site will receive its own number. Send the completed form to your ***state*** hazardous waste office. The address will be included in the information booklet that you will receive with the form.

USEFUL TIP

A few states use a form that is different from EPA form 8700-12. Check with your state agency to obtain the correct form.

What Are the Hazardous Waste Generation and Accumulation Limits for SQGs?

As an SQG, your cooperative is limited to generating less than 2,200 lbs (1,000 kg) of hazardous waste per month, and accumulating a maximum of 13,228 lbs (6,000 kg) of waste on site at any one time. You may only store your waste on site for 180 days before sending it off site for recovery, treatment or disposal. This accumulation time limit may be up

You may only store your waste on site for 180 days, or less

to 270 days if you must transport the waste more than 200 miles from your cooperative for recovery, treatment or disposal. Limited extensions to the time limits for accumulating your hazardous wastes may be granted by the state or regional EPA administrator for very specific reasons.

ACCUMULATION WARNING!

If you accumulate your waste longer than 180 days (or 270 days, see text), you are considered a treatment, storage, or disposal facility (TSDF) and must obtain an EPA operating permit.

While accumulating your hazardous waste at your cooperative, you are responsible for its safe management, which includes safe storage, safe treatment, preventing accidents, and responding to emergencies (such as spills) in accordance with federal regulations (see Chapter 7 for appropriate spill response activities and requirements). Safe storage practices are described below.

3.3.3 What Are Recommended Practices for Safe Storage of Hazardous Waste?

USEFUL TIP

It is a good practice never to mix wastes. Mixing wastes can create an unsafe work environment and potentially can lead to complex and expensive cleanups and disposal.

Wastes may be accumulated in tanks or containers (such as 55-gallon drums). Tanks or containers must be made of or lined with material compatible with the waste to be stored (to prevent the waste from corroding or reacting with the container). Take care not to mix incompatible types of waste or materials in the same container or tank (see box). Containers and tanks must be labeled with the words "HAZARDOUS WASTE," and containers must be marked with the date the waste was generated (i.e., the date when hazardous waste was first put into the container). You also should mark the EPA waste code on the container. Although Federal regulations do not require you to mark the EPA waste code on the container, most states do, and it is highly recommended.

Containers—You must keep your containers of hazardous waste closed (i.e., bungs and lids screwed tight) during storage; open them only when adding or removing waste. You must maintain the containers in good condition. Your containers should not be handled, stacked, or stored in any way that might rupture them, cause them to leak, or otherwise fail. If you store a few or many containers together in one area, you should

maintain enough space between or around your containers to permit unobstructed access by emergency personnel, or movement of fire protection, spill control, or decontamination equipment. Ignitable waste cannot be stored within 50 feet of a property line. NFPA requirements must be maintained also (see box). You should inspect the areas where containers are stored at least weekly to look for leaks and deterioration of the containers. The containers should be on pallets to be sure the bottom is not leaking. Weekly inspections also can be used to ensure that containers are being handled and stored correctly to prevent leaks or ruptures. If a container leaks, put the waste in another container, or contain it in some other way that complies with EPA regulations.

USEFUL TIP – STORING REACTIVE OR IGNITABLE WASTES IN TANKS OR CONTAINERS

The National Fire Code established by the National Fire Protection Association (NFPA) sets buffer zone requirements that specify distances considered to be safe for covered tanks containing ignitable or reactive wastes. You can obtain these requirements and other information on storing reactive or ignitable wastes by calling the NFPA at (617) 770-3000. The information will be under the list of publications for the "Flammable and Combustible Liquids Code."

Container Storage Areas—You should consider setting aside and marking a designated ***on-site hazardous waste storage area*** for your hazardous waste that should be considered a collection area for your whole cooperative. You also can accumulate up to 55 gallons of hazardous waste in properly labeled containers at or near the various parts of your cooperative where the waste is generated. These are called ***satellite accumulation areas***. Once 55 gallons of hazardous waste in properly labeled (marked "HAZARDOUS WASTE") containers or drums has accumulated in your satellite area, you must note the date on the container (when 55-gallons was accumulated) and move it to your designated on-site hazardous waste storage area.

As discussed above, SQGs can store waste on-site for 180 days (or for up to 270 days if the waste must be shipped over 200 miles) before sending it off site for recovery, treatment or disposal (there is no time limit for waste storage at CESQGs). The type of storage area SQGs must maintain and the container marking requirements are set by your state. Contact your state for details on these requirements.

Container Disposal—You must not throw away containers with product in them. If you have a container that has been emptied as much as possible by normal means, such as pouring, and has less than 1 inch of

You can not dispose of a container until less than 1 inch of product remains

product (or less than 3 percent of the total amount of product) remaining, the container can be crushed, recycled, or thrown away. Otherwise you must scrape out the product on the inside of the container and properly manage it as hazardous waste. Containers that have held acutely hazardous waste (P-listed wastes and a few F-listed wastes) must be triple rinsed before they are no longer regulated as hazardous waste. However, the rinsate from these containers is regulated as hazardous waste, and must be managed accordingly.

Tanks—You should provide at least two feet of freeboard (space at the top of the tank) in uncovered tanks, unless the tank is equipped with a containment structure, a drainage control system, or a standby tank with adequate capacity. You should equip any of your tanks that have automatic waste feed with a waste feed cutoff system, or a bypass system for use in the event of a leak or overflow. If you store reactive or ignitable wastes in tanks you should follow the National Fire Protection Association (NFPA) requirements (see box) for buffer zones between tanks, and for other precautions about storing these types of wastes in tanks. You should inspect discharge control and monitoring system equipment on your tanks, and the level of waste in uncovered tanks at least once each operating day. You also should examine the tanks and surrounding areas for leaks or other problems (such as corrosion) at least weekly. Chapter 5 provides additional information on managing and maintaining storage tanks.

3.3.4 How Should My Cooperative Be Prepared for and Respond to an Emergency?

Designate emergency coordinat-or(s) and prepare a contin-gency plan

The best way to prepare your facility for an emergency is to have a written contingency plan and a designated emergency coordinator. A contingency plan usually answers a set of "what if" questions such as what if one of the vapor degreasers leaks, what if there is an explosion and/or fire at a hazardous waste storage area? An emergency coordinator is an employee or group of employees, one of whom is on site or on call at all times and has the responsibility of coordinating all emergency response measures. Emergency coordinators must respond to any emergencies that arise.

Employees must be familiar with emergency procedures

EPA does not require CESQGs or SQGs to prepare a written contingency plan, in case of fire, explosion, or toxic release, however, having such a plan would provide an organized and coordinated course of action. Information on preparing contingency plans, is provided in Chapter 7. EPA does require all facilities to designate an emergency coordinator or coordinators, and requires that all employees be familiar with proper

waste handling and emergency response procedures as they apply to the employees responsibilities.

CESQGs—There are no emergency response requirements for CESQGs. However, it is good business practice to have, at a minimum, established basic safety guidelines and response procedures (such as the ones described in this section) to follow in the event of an emergency.

SQGs—EPA requires all SQGs to establish safety guidelines and procedures. EPA requires SQGs that store hazardous waste on site to be equipped with and ensure that personnel handling hazardous waste have access to the following:

Emergency requirements for SQGs

- An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to all personnel.
- A device, such as a telephone (immediately available at the scene of operations) or a hand-held, two-way radio, capable of summoning emergency assistance from local police and fire departments or emergency response teams.
- Portable fire extinguishers, fire control devices (including special extinguishing equipment , such as that using foam, inert gas, or dry chemicals), spill control materials, and decontamination supplies.
- Water at adequate volume and pressure to supply water hose streams, foam-producing equipment, automatic sprinklers, or water spray systems.

IN CASE OF EMERGENCY

In the event of a fire, explosion, or other release of hazardous wast that could threaten human health outside your cooperative, or if you think that a spill of a reportable quantity (note that for oil or gasoline spills, any spill that causes a sheen on surface waters must be reported) has reached surface water, call the National Response Center at 800-424-8802 to report an emergency. The Response Center will evaluate the situation and help you make the appropriate emergency decisions. In many cases, you will find that the problem you faced was not a true emergency, but it is better to call if you are not sure. Stiff penalties exist for failing to report emergencies!

Your cooperative must test and maintain all equipment to ensure proper operation. You also must attempt to secure arrangements with fire departments, police, emergency response teams, equipment suppliers, and local hospitals, as appropriate, to provide services in the event of an

emergency. Information on requirements for notification of emergency officials is provided in Chapter 7. Your contingency plan does not have to be a separate document, it may be part of your facility spill plan if you are required to prepare such a plan (see Chapter 7).

3.3.5 What Are the Waste Management Reporting Requirements?

Your cooperative is required to meet various reporting and recordkeeping requirements as part of your hazardous waste management obligations. These requirements are summarized below.

Uniform Hazardous Waste Manifest—The Uniform Hazardous Waste Manifest Form (EPA Form 8700-22) is a multicopy shipping document that reports the contents of the shipment, the transport company used, and the treatment/disposal facility receiving the waste. The manifest form is designed so that shipments of hazardous waste can be tracked from the site of generation to the final destination. Information for completion of this form is discussed in detail in Chapter 4. You must keep a copy of the manifest signed by the transporter who receives your waste for transportation. You must keep this copy until you receive a signed copy of the manifest from the company that takes your waste. It is important that you receive a signed copy of the manifest from the company that takes your waste because this is your proof that the waste made it to the final destination. The signed copy of the manifest is required to be kept on file for 3 years.

Land Disposal Restriction Notification—Land disposal restrictions (see Section 3.4.1) are regulations prohibiting the disposal of some hazardous wastes on land (i.e., in landfills) without prior treatment of the waste. A list of wastes that require treatment is provided in 40 CFR 268.40. With your initial shipment of hazardous waste to each treatment or storage facility your cooperative uses, you will have to provide a notification that specifies which of the wastes you have generated is restricted from land disposal. You also are required to submit a notification to each facility used every time your waste changes. This notification should be attached to your hazardous waste manifest (see above, and Chapter 4) and a copy placed in the file. This notification ensures proper treatment and disposal; copies of each form must be kept for 5 years.

If you plan to ship wastes off-site for recycling, then you may not need a Land Disposal Restriction Notification Form for every shipment. For SQGs, a “tolling agreement” can be developed for shipments after the initial shipment. Please contact your state for more information on these agreements, and the land disposal restrictions for your state.

3.4 HOW DO COOPERATIVES MANAGE SPECIFIC WASTES THEY GENERATE?

You are responsible for determining whether your waste is hazardous or not.

Typical wastes generated by cooperatives include office wastes, universal wastes (batteries, thermostats, pesticides), used oil, solvents, antifreeze, shop rags, non-PCB electrical equipment, lamps, paints, and spent aerosol cans. With the exception of most office wastes (toner cartridges, inks, and fluorescent light tubes can be characteristic hazardous waste - see Section 3.4.2) and used oil, these types of wastes could be classified as hazardous, and must be disposed of according to the requirements in RCRA. As the generator of the waste, you are responsible for determining whether it is hazardous or not. If you generate a waste that may be considered hazardous, the regulations require that either you have it tested, or assume it is hazardous and manage it accordingly. This section provides information for some specific types of wastes that cooperatives generate, including whether the waste is likely to be hazardous, and proper management and disposal practices for the various types of wastes your cooperative generates. A waste determination guide is provided in Section 3.5.3 to assist you with determining if your wastes are hazardous, and possible disposal techniques.

You are liable for your wastes after they leave your cooperative

It is important to be aware that even if you have shipped your waste off-site and the waste no longer is in your possession, your liability has not ended. Your cooperative can be held liable for any mismanagement of your wastes by your transporter, recycler, or treatment/disposal facility, even after they leave your facility. Even if your cooperative, waste transporter, or waste recycling, disposal, or treatment facility performs operations authorized by permits, if the company becomes bankrupt or can not accept the financial responsibility for a cleanup of hazardous waste, your cooperative may have to. So you can see it is important for you to know the proper procedures for managing your wastes.

3.4.1 Treatment and Disposal Methods

There are a number of different recycling, treatment and disposal methods available for your wastes, depending on the type of waste. They include landfilling, various

USEFUL TIP

Treatment or disposal facilities for solid or hazardous wastes must have some type of RCRA permit, depending on the operations at the facility. Recycling or reclamation facilities are not required to have a permit for the recycling process, only an EPA I.D. number. However, if the facility stores the waste for any length of time prior to recycling, it must have a permit to store the waste. Facilities receiving your wastes should have an EPA I.D. number, and provide you with a full copy of any applicable permits on your request.

forms of thermal destruction, and recycling. These methods are discussed below. It is important to note that the regulatory definition of recycling includes reclamation and resource recovery. EPA regulates treatment and disposal methods under RCRA (see box).

Landfills

Solid wastes and some types of hazardous wastes can be disposed in landfills. Solid wastes may be disposed in hazardous waste landfills, but hazardous wastes from SQGs and LQGs can not be disposed in solid waste landfills. Solid waste landfills are also known as municipal landfills or municipal solid waste landfills. Some states have special requirements for non-hazardous industrial waste landfills.

In the past, solid waste landfills did not employ any measures to prevent hazardous contaminants from migrating into the soils or groundwater, however, most new solid waste landfills do have liners. Hazardous waste landfills must have systems for preventing migration of the hazardous wastes from the landfill, and for detecting whether any hazardous wastes have migrated from the landfill. The costs for disposing of wastes in hazardous waste landfills are much higher than for solid waste landfills, because of the required prevention systems, and because of the liability to the operators, should hazardous wastes migrate from the landfill.

Land disposal restrictions

Hazardous waste landfills could be thought of as long-term storage facilities. EPA recognized this limitation and developed the land disposal restriction regulations which contain requirements for treating some hazardous waste (that are "restricted from land disposal" without some type of treatment) prior to disposal in a landfill. Land disposal restrictions were established to minimize the potential for landfilled hazardous waste to affect the environment. Examples of treatment prior to disposal include stabilization or solidification of liquid hazardous wastes.

USEFUL TIP

Whenever possible, alternatives that recycle or destroy your cooperative's waste should be chosen over landfilling. These alternatives could lessen your potential liability should the landfill be mismanaged and/or leak contaminants into the environment.

Thermal Destruction

The most common forms of thermal destruction for wastes are incineration, and open burning. Incineration involves thermal decomposition of the waste material by using a regulated flame, under

controlled conditions. Incineration reduces waste volumes and produces heat and chemical byproducts, some of which may be reused, or recycled. Emissions from incinerators are controlled to limit the discharge of pollutants to the air. PCBs and PCB equipment (see Chapter 2) are typically destroyed using incinerators. Cement kilns are a type of incinerator used to destroy hazardous wastes. Open burning can sometimes be used to destroy non-hazardous wastes such as office trash, or brush, but can not be used for disposal of hazardous wastes (Chapter 12 discusses open burning requirements).

Costs for destroying your wastes in an incinerator can be high, but often this is the best method for destroying the waste. Disposing of wastes by burning for energy recovery is much less expensive than incineration, but is not appropriate for many types of wastes.

Recycling/Reclamation/Resource Recovery

USEFUL TIP

Some resource recovery activities (solvent distillation, antifreeze recycling) have the advantage of reusing existing product (and not consuming more product) as well as preventing possible soil and groundwater contamination from landfills, and eliminating air emissions from incinerators.

The definition of recycling includes activities such as reclamation, energy recovery, and other resource recovery activities. Recycling is usually the least expensive and least stringently regulated of the waste disposal methods. Some recycling activities such as solvent distillation, antifreeze recycling, burning used oil (or mixtures of used oil and solvents) for heat generation can be performed at your cooperative and the equipment for performing these operations is readily available. Recycling of other hazardous wastes such as batteries and PCBs can be performed by a qualified recycling facility.

Chemical dechlorination and solvent extraction are recycling techniques for reclaiming PCB-contaminated oils. The result of chemical dechlorination is treated oil and a small amount of PCB sludge. The oil can be used as a dielectric fluid or reused as fuel in energy recovery, and the PCB sludge is regulated under TSCA. Solvent extraction of PCBs is another technique for PCB-contaminated oils. Freon is not a hazardous waste when recycled, but special training and certification is required for recycling or recovering freon.

3.4.2 Office Waste

As long as it does not contain any hazardous wastes, refuse generated in your cooperative's business office is considered solid waste, and can be disposed of in any municipal solid waste landfill. Examples of office waste that can be characteristic hazardous waste include toner cartridges, some types of inks, and fluorescent light tubes. Non-hazardous office waste also may be burned under certain conditions (see box, and Chapter 12 for details).

BURNING OFFICE WASTE

You should check with your state and/or local municipality to determine requirements for burning any non-hazardous solid waste your cooperative generates (see Chapter 12).

3.4.3 Universal Waste

Under the Universal Waste Rule (see Section 3.2.2), any SQG or LQG that produces universal waste may choose to manage that waste according to the universal waste requirements, in states that have adopted the less stringent requirements. The Universal Waste regulations are much less stringent than those for other hazardous wastes (see below), and usually it is advantageous for a cooperative that is an SQG or LQG to follow the universal wastes requirements.

UNIVERSAL WASTE MANAGEMENT REQUIREMENTS FOR CESQGs

CESQGs are not required to meet waste management requirements of the universal waste rule (see below), and may dispose of universal wastes as non-hazardous solid wastes.

Most cooperatives that choose to manage their universal wastes according to the requirements of the Universal Waste Rule probably qualify as a small quantity universal waste handler (SQUWH) (see Section 3.2.2 for definitions), rather than a large quantity handler. If your cooperative does its own transporting of your universal wastes to a universal waste handler (for recycling reuse or disposal), you also will be considered a universal waste transporter, and there are specific requirements in the Universal Waste Rule for transporters. Since most cooperatives do not transport their wastes, this section will focus only on the requirements for small quantity handlers.

Management requirements for Universal Waste

The substantive requirements under the universal waste rule for SQHUWs can be found at 40 CFR 273, Subpart B, and are summarized, below.

- You must manage your universal wastes to prevent the release of any universal waste or its components, and all releases must be

contained immediately. You must manage any release(s) of non-universal wastes according to the requirements in 40 CFR 260-272 (as discussed in this Chapter).

- You must not dispose, dilute, or treat your universal waste, except if you are responding to a release.

- You must clearly mark or label the waste item or container in which the waste is contained as follows:

  ✔ **Universal Waste**—type of waste (i.e., Battery(ies), Pesticide(s), Mercury Thermostat(s).

  ✔ **Waste**—type of waste (i.e., Battery(ies), Pesticide(s), Mercury Thermostat(s).

  ✔ "Used Battery(ies)," "Used Pesticide(s)," or "Used Mercury Thermostat(s)" (list only the one type of waste that applies).

- You can not accumulate your universal wastes for more than one year, except if you need a longer period to accumulate sufficient waste to facilitate proper recycling, treatment or disposal.

- If your cooperative is a SQHUW, you must inform all your employees of proper handling and emergency procedures for the universal wastes you generate.

- If your cooperative is a SQHUW, you may not transport your universal wastes to facilities other than universal waste handlers, universal waste destination facilities, or foreign destinations, and if you transport your universal wastes you must follow transporter requirements (see Chapter 4).

- If your cooperative is a SQHUW, and you send your universal wastes that are also hazardous wastes off-site, you must comply with transportation requirements for hazardous wastes (see Chapter 4) including packaging, labeling, marking and placarding the shipment, and preparing the correct shipping papers.

- If your cooperative is a SQHUW and your shipment of universal waste is rejected, you must either receive the waste back, or agree on an alternative destination facility.

- If a destination facility receives hazardous waste that is not universal waste from your cooperative, the facility must notify the Regional EPA office with your shipper information.

- If you are a SQHUW, you are not required to keep records of your shipments of universal wastes.

- If your cooperative is a SQHUW that exports universal wastes to a foreign destination, you must comply with specified primary exporter regulations (in 40 CFR 262 Subpart E), and obtain consent of the receiving country (usually through EPA). EPA acknowledgment of consent also is required.

3.4.4 Used Oil Management (Including Transmission Fluid, Brake Fluid, and Used Oil Filters)

Used lubricating oils include: motor oils; synthetic oils; transmission and brake fluid; non-hazardous petroleum-based lubricating fluids; hydraulic, cutting, gear and cooling oils; used oil filters; and transformer oils that contain less than 50ppm PCBs (see Chapter 2). Many of these are typically generated by cooperatives as a result of servicing vehicles and electrical equipment. Used oil is very difficult to dispose of. ***Used oil should not be disposed in sewers, drains, waste dumpsters or on the ground, or used for dust suppressant or control.*** Recycling (including burning for energy recovery - see below) of used oil that has not been mixed with any other waste (see below) is the most environmentally protective, and, often, the most economical approach to handling your used oil.

Recycling is the best disposal method for used oil

To create incentives for recycling of used oil, while ensuring that the oil is managed to protect human health and the environment, EPA developed the Used Oil Management Standards. These are a set of less strict requirements for managing used oil that is to be recycled. The Used Oil Management Standards apply to all automotive service shops (which may be one of your cooperative's operations), regardless of the amount of used oil generated. They can be found in 40 CFR 279.

If not recycled, used oil is subject to hazardous waste determin-ation

Disposal of used oil other than by recycling can be difficult, for a number of reasons. The primary reason is that municipal solid waste landfills do not accept liquids for disposal, and ***you may not dispose of the oil on the land***. Second, under the Used Oil Management Standards, if used oil is not to be recycled, it is subject to the solid and hazardous waste determination requirements under RCRA (discussed in Sections 3.1.3 and 3.1.4). So if the used oil is determined to be hazardous it must be

disposed of in a hazardous waste incinerator. If non-hazardous, since it can not go to a landfill, the only option is recycling.

Do Not Mix Hazardous Waste with Used Oil

You should not mix used oil with other materials regardless of the proportions because the mixture could be considered hazardous waste (see discussion of the mixture rule in Section 3.1.5), and you might not be able to manage and/or recycle it under the Used Oil Management Standards. Table 3-1 indicates which regulations apply to particular mixtures of used oil. It is important to note that, as Table 3-1 shows, EPA allows CESQGs to manage and designate mixtures of used oil and hazardous wastes as used oil, but not SQGs. However, many states do not permit such practices, and many waste transporters will not accept used oil that has been mixed with hazardous waste (or will charge significantly more to transport the mixture than for used oil that has not been contaminated), regardless of your generator status. Where "solid waste/hazardous waste determination" is indicated in Table 3-1 for SQGs, the used oil requirements do not apply and the used oil must be managed as any other solid waste that is potentially a hazardous waste as described in Section 3.3.3.

Used Oil Mixing Constraints

As Table 3-1 illustrates, EPA does not have strict mixing prohibitions for CESQG's, and permits SQG's to mix certain waste streams with their used oil without having to comply with the more strict hazardous waste requirements. However, some states do not allow even CESQGs to mix any hazardous waste streams with used oil. Check with your State to determine whether such mixing of used oil is allowed. It is not recommended that you mix solvents with used oil unless you intend to burn the mixture in your cooperative's space heaters (see below). EPA-approved waste transporters do not always accept solvent/oil mixtures, or may charge significantly more for transportation of mixtures than for segregated wastes (because the transporter may be required to manage the entire mixture as hazardous waste).

As Table 3-1 indicates, materials that are hazardous only due to the characteristic of ignitability may be mixed with used oil provided that the resulting mixture does not exhibit the characteristic of ignitability. In other words, materials such as fuel, kerosene, heating oil, and mineral spirits, all of which may be hazardous only because they can catch on fire, may be mixed with used oil, provided the mixture is not ignitable. If the resulting mixture is ignitable, or the used oil is mixed with a listed waste,

Table 3-1. EPA Regulatory Classification of Used Oil and Used Oil Mixtures that are Destined for Recycling.

Material	Small Quantity Generator Regulatory Standards[1]	Conditionally Exempt Small Quantity Generator Regulatory Standards[1]
Used Oil only	Used Oil	Used Oil
Used Oil mixed with listed hazardous waste (e.g. solvent)	Hazardous Waste	Used Oil
Used Oil mixed with characteristic hazardous waste (e.g. corrosive)	Used Oil if no characteristic, Hazardous Waste if exhibits characteristic	Used Oil
Used oil mixed with waste exhibiting only ignitability characteristic and mixture does not exhibit ignitability characteristic.	Used Oil	Used Oil

1 States may have more stringent regulatory classifications than EPA. Check with your state for the appropriate classification.

or a waste with the characteristic of toxicity, corrosivity or reactivity, the mixture must be managed as a hazardous waste. Ignitability is determined by a specific analytical method in a laboratory.

Testing Used Oil for Hazardous Waste Contamination

EPA has established specific methods for testing used oil for contamination. While an EPA-approved laboratory test would be required for a definitive determination, cooperatives have other options available. Because testing is not required by EPA and because certain types of contamination will still allow your cooperative to manage its used oil under the used oil regulations, you may use one of the following methods, rather than a more expensive test:

- Visually inspecting the oil for a sign of antifreeze, solvent or other substance that does not appear to be oil

- Using a “sniffer,” which is a hand held detector that the facility puts near the substance and the sniffer indicates whether the total halogens are higher than what is normal for used oil. The sniffer would detect high concentrations of gasoline or solvent mixed with the oil because gasoline and solvent give off more vapors that the sniffer can detect.

Acceptable Recycling Methods for Used Oil

Using used oil in cooperative space heaters

Used oil may be recycled (i.e., burned for energy recovery, or refined/ reprocessed). If used for energy recovery, your used oil may be burned in space heaters at your cooperative's auto repair shop, provided you burn only the oil you generate (or receive from "do-it-yourselfers"), the heater(s) has a design capacity of not more than 500,000 Btu per hour (most repair facilities have heaters with a design capacity between 100,000 and 300,000 Btu per hour), and the combustion gasses from the heater are vented to the outside air. Unless your repair facility is unusually large or is burning more oil than necessary to heat the repair shop, it is unlikely it would have a heater with a design capacity greater than 500,000 Btu per hour.

You may also send your used oil to an off-site energy recovery facility. Cooperatives should ensure that the facility receiving the used oil is EPA-approved (i.e., the facility has an EPA identification number). The used oil must be prepared for transportation to the recycling or energy recovery facility according to the requirements in Chapter 4, and must be transported by an authorized waste transporter (also must have an EPA identification number).

You can reuse your recycled used oil

Your cooperative's used oil also may be sent to a refiner or reprocessor for recycling. You may receive your recycled used oil back from the refiner/reprocessor for use as a lubricant, cutting oil, or coolant if you have such a need at your cooperative. The most effective way to accomplish this is to contract a tolling arrangement with your transporter. In this case, (and only in this case) you may use a transporter that does not have an EPA identification number, provided the contract indicates:

- The type of used oil and the frequency of shipments,
- That the vehicle used to transport the used oil to the processing/ rerefining facility and to deliver the used oil back to the shop is owned and operated by the processor/rerefiner, and
- The reclaimed oil will be returned to the generator.

Used oil that becomes contaminated by a hazardous waste must be disposed at a RCRA-permitted disposal facility. The hazardous waste must be prepared for transportation to the disposal facility according to the requirements in Chapter 4, and must be transported by a permitted waste transporter (i.e., has an EPA identification number).

Used oil recordkeeping

EPA does not require tracking or recordkeeping for used oil generation or shipments. However, it is recommended that your cooperative keep logs or other records of off-site shipments of used oil. Transporters, recyclers

and burners of used oil are subject to more stringent requirements. Thus, keeping records of off site shipments should help limit liability if a transporter, recycler, or burner mismanages your cooperative's used oil.

Used Oil Filters

Used oil filters may be managed in two ways. They may be managed as materials contaminated with used oil, or they must be completely drained and then either recycled for scrap metal or disposed as nonhazardous solid waste. Most facilities drain the oil from the filters and then dispose or recycle them. If your cooperative drains the oil from the filters, you must ensure that the filters are completely drained using one of the following EPA approved methods:

- Puncturing the filter anti-drain back valve or filter dome end and hot-draining for at least 12 hours, or
- Hot-draining and crushing, or
- Dismantling and hot draining, or
- Any other equivalent hot-draining method which will remove all the used oil in the filter.

You should be aware that some states may have different requirements for completely draining the oil filter. Check with your state for any requirements that apply to you. The used oil from the filter must be managed according the requirements described above, and your state's requirements.

Used Oil Contaminated Rags, Wipes, and Spill Cleanup Material

Used oil contaminated materials may only be disposed, recycled or burned for energy recovery. According to the used oil regulations, where the oil is potentially free flowing from the material (e.g., rags, wipes, or some absorbent materials), the material can be managed under the used oil requirements described above, or as RCRA wastes (i.e., they must be characterized as hazardous or non-hazardous and managed and disposed accordingly). Used oil contaminated material where there is no sign of free flowing oil, must be tested to determine if it is hazardous waste. If the material is hazardous, it must managed as RCRA waste. Many repair operations avoid the waste determination process by sending rags to a laundering facility for washing, rather than disposal.

3.4.5 Spent Solvents

EPA waste management regulations are applicable only to "spent solvents," or those that have been "generated" as waste. Solvents that are ***being used*** in a parts washer may be regulated under EPA air regulations or OSHA chemical storage regulations, but they are not regulated under RCRA (since they are not yet waste). Spent solvents are likely to be hazardous wastes, unless they are citrus or water-based (check the MSDS for your solvent to determine whether the spent solvent will be hazardous waste).

Criteria for regulating solvents under RCRA

For a chemical to be regulated under RCRA as an F-listed spent solvent, it must meet three criteria:

- It must be on the list of spent solvents identified as F001 through F005 in 40 CFR 261.31 (see Table 3-2).
- It must be present in the unused product at a concentration of at least 10 percent, or be present with other F-listed solvents in the unused product at a total concentration of at least 10 percent (check the MSDS).
- It must have been used as a solvent.

Table 3-2. 40 CFR §261.31 Listed Hazardous Waste Solvents (F001 through F005)

Industry and EPA Hazardous Waste Code	Hazard Code[1]	Name of Hazardous Waste	Type of Hazardous Waste	Description
F001	(T)	Tetrachloroethylene Trichloroethylene Methylene chloride 1,1,1-trichloroethane Carbon tetrachloride Chlorinated carbons	Spent halogenated solvent used in degreasing.	Spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F002	(T)	Tetrachloroethylene Methylene chloride Trichloroethylene 1,1,1-trichloroethane Chlorobenzene 1,1,2-trichloro-1,2,2-trifluoroethane Ortho-dichlorobenzene Trichlorofluoromethane 1,1,2-trichloroethane	Spent halogenated solvents	Spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F001, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F003	(T)	Xylene Acetone Ethyl acetate Ethyl benzene Ethyl ether Methyl isobutyl ketone n-butyl alcohol Cyclohexanone Methanol	Spent non-halogenated solvents.	Spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one or more of the above non-halogenated solvents, and a total of ten percent or more (by volume) of one or more of those solvents listed in F001, F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F004	(T)	Cresols Cresylic acid Nitrobenzene	Spent non-halogenated solvents	Spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.
F005	(I,T)	Toluene Methyl ethyl ketone Carbon disulfide Isobutanol Pyridine Benzene 2-ethoxyethanol 2-nitropropane	Spent non-halogenated solvents.	Spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above non-halogenated solvents or those solvents listed in F001, F002, and F004; and still bottoms from the recovery of these spent solvents and spent solvent mixtures.

1 T = Toxicity, I = Ignitability

Even if the spent solvent does not meet these criteria (and, therefore, is not a listed hazardous waste), the properties of the product or the contaminants that end up in the solvent through use may make the solvent hazardous by characteristic (see Section 3.1.4). Some solvents contain enough benzene or may accumulate enough metals to meet the toxicity characteristic.

Approved Solvent Disposal Methods

All generators are permitted to manage their hazardous waste solvents via a solvent recycling service, or dispose of them by an EPA-approved hazardous waste incinerator. The transporter of the hazardous waste solvents must have an EPA identification number. EPA also allows small quantity generators to mix hazardous waste solvent with used oil provided that the resulting mixture does not exhibit any of the characteristics of a hazardous waste (see Section 3.4.4). Conditionally exempt small quantity generators may mix characteristic or listed waste with used oil and manage the resulting mixture as used oil (see Section 3.4.4). However, keep in mind that many states do not permit mixing, even for CESQG's (see Section 3.4.4). Facilities that have prior written approval from their wastewater treatment facility may be permitted to dispose of hazardous waste solvent with facility wastewater.

USEFUL TIP

It is not recommended that you mix solvents with used oil unless you intend to burn the mixture in your cooperative's space heaters (see Section 3.4.4). EPA-approved haulers do not always accept solvent/oil mixtures, or may charge significantly more for transportation of mixtures than for segregated wastes (because the hauler may be required to manage the entire mixture as hazardous waste).

Contracting for Solvent Use and Disposal

Many cooperatives contract their solvent use and disposal with outside vendors. Contracting for your solvent use and disposal typically is worthwhile. While your cooperative is still the generator, it does not have to store the waste solvent, arrange for its disposal, prepare it for shipping to an approved, licensed solvent disposer, or complete and maintain the manifest for the shipment (although in practice, outside vendors often use the manifest as a tracking document for each shipment). While the solvent is in the washer, it is not considered a waste by EPA. The outside vendor is responsible for replacing the solvent in the parts washer and for disposing of the waste solvent.

While your cooperative is not required to maintain manifests if you have an arrangement with an outside vendor, the solvent must be reclaimed under a contractual agreement where following requirements must be met:

- The type of waste and frequency of shipments are specified in the agreement

- The vehicle used to transport the waste to the recycling facility and to deliver regenerated material back to the generator is owned and operated by the reclaimer of the waste

- The cooperative maintains a copy of the reclamation agreement in its files for a period of at least three years after termination or expiration of the agreement.

Currently (January 1997), one outside vendor contracts the use of several solvents, some that are typically hazardous (due to ignitability), and others that are not. The hazardous solvents typically are contained a different color parts washer than the nonhazardous solvents. To confirm whether the solvent contained in the parts washer is hazardous, check the Material Safety Data Sheet (MSDS) for the solvent being used (these should be provided by your vendor). The MSDS will indicate whether the solvent, once it is a waste, will have any of the characteristics of a hazardous waste, or will contain any materials that are listed wastes. Remember, by mixing the solvent with hazardous waste (such as pouring spent hazardous waste solvent in a non-hazardous waste solvent parts washer) will make the mixture a listed hazardous waste.

3.4.6 Used Antifreeze

Waste antifreeze has the potential to be a hazardous waste due to its potentially high pH (corrosivity characteristic) or its potential to have a high lead content (toxicity characteristic). Because waste antifreeze has the potential to be a hazardous waste, facilities must determine whether the waste antifreeze is hazardous or nonhazardous.

There are several good management practices that your cooperative should incorporate for your waste antifreeze. It should be noted that these management practices are not required by EPA (but they may be required by your state). They include labeling, segregation and containment (see Section 3.3.3).

How to Determine if Antifreeze Is Hazardous Waste

Using process knowledge to determine if used antifreeze is hazardous

Your cooperative can determine whether or not the antifreeze used in your vehicles is hazardous by laboratory testing of the antifreeze or by process knowledge. If your cooperative makes the hazardous/ nonhazardous determination solely by testing, you must test each batch of antifreeze changed from each vehicle serviced. If you use process knowledge, your determination must involve a demonstrated understanding of the potentially hazardous constituents in antifreeze. Such a demonstrated understanding could include a combination of the

information on the MSDS for the type of antifreeze used, a referral to a previous test that demonstrated that antifreeze from new vehicles does not contain metals from the cars, and having a procedure to ensure that any suspect antifreeze is segregated from antifreeze known not to be hazardous. Process knowledge can also be affirmed if your cooperative explains its approach to the State or EPA and they agree that your antifreeze is not a hazardous waste**.**

Functional indicators of antifreeze being hazardous waste

In addition to testing and process knowledge, there are two functional indicators that the antifreeze is, or is likely to be a hazardous waste. First, antifreeze would be considered hazardous waste if it is mixed with a hazardous waste (such as an F-listed solvent listed in Table 3-2, gasoline, or used oil). Second, antifreeze could be hazardous if it comes from an older vehicle where the antifreeze has been sitting for years and has picked up enough metals (primarily lead) to be characteristically hazardous for metals content.

Reclaiming/Recycling Antifreeze

To avoid having to manage and dispose of your antifreeze as hazardous waste, you can reclaim used antifreeze in a closed loop system, connected by piping, and return it to the vehicle it came from. EPA does not consider such reclaimed material to be a solid waste. Thus, even though the antifreeze may be hazardous, it is not considered to be a hazardous ***waste*** because the antifreeze is returned to its original use as a coolant. Closed loop antifreeze recycling systems are available that connect directly to the car radiator, filter the antifreeze and put it directly back into the car. Because these systems are considered closed loops, they avoid the waste characterization process for the reclaimed antifreeze. However, any filters in the recycling equipment do need to be characterized as hazardous or nonhazardous when replaced. Non-closed loop systems are available that connect to a used antifreeze storage drum. However, because these are not closed loop systems, the antifreeze in the drum may be considered hazardous waste.

Waste Antifreeze Disposal

If you do not recycle your waste antifreeze at your cooperative, it may be recycled off site, by an EPA-approved facility. If it is hazardous waste (because of its lead content), you must transport it by a transporter with an EPA identification number, and prepare it for transport according to the requirements in Chapter 4. Waste antifreeze that is mixed with other fluids must be characterized to determine if it is hazardous waste, and disposed accordingly. Non-hazardous waste antifreeze also may be disposed at a landfill that is authorized to accept waste antifreeze. Many

landfills have a tank designated for used antifreeze disposal. Used antifreeze may not be dumped with regular trash.

3.4.7 Used Shop Rags

Although EPA has no requirements specific to used shop rags or towels, rags or towels must be managed as hazardous wastes if they are contaminated with a hazardous waste, such as F-listed solvent, or the rags display a hazardous characteristic due to the presence of gasoline, or metals contaminated antifreeze. EPA allows auto repair shops to dispose of used rags by having them washed through a laundry service (see box), or disposing them through an EPA-licensed hazardous waste transporter and disposal facility. CESQGs that burn their used oil in a boiler to heat the shop may mix their used rags with the used oil being burned. CESQGs also have other disposal options as discussed in Section 3.3.1. Since states have the lead on rag issues, it is imperative that your cooperative understands your state's policy.

USEFUL TIP – RAG LAUNDERING

Many states do not consider rags going for laundering to be a hazardous waste (although a hazardous waste could be generated by the launderer). If the rag is not discarded, the facility is not subject to EPA hazardous waste requirements, even if rags are contaminated with hazardous waste. However, some states may consider rags to be solid waste, even if they are to be sent for laundering. Check with your state on requirements for management of these rags.

Used Rag Storage

Used rags contaminated with hazardous waste and destined for disposal (not destined for washing) must be stored according to the hazardous waste storage requirements applicable to your cooperative's generator status (see Section 3.3.3). There are no specific requirements for CESQGs, while SQGs must store their rags as described in Section 3.3.3. Although not required by EPA, used rags that are not considered a hazardous waste should be stored in a separate container from regular trash, such as a bucket, can, or barrel that only contains rags.

3.4.8 Non-PCB Electrical Equipment

Non-PCB means PCB concentration less than 50 ppm

Electrical equipment that has dielectric fluid containing less than 50 ppm PCBs is considered non-PCB (see Chapter 2). Non-PCB electrical equipment to be discarded should be drained, when practical, and the oil disposed separately from the carcass. Carcasses of non-PCB electrical equipment can be disposed in municipal solid waste landfills, or they may be sold to scrap and salvage dealers. Methods other than disposal in a landfill, such as recycling of the metal, are recommended because they are more protective of the environment. However, some caution should be exercised in selecting outside recycling vendors (because of the liability issues. Chapter 2 provides a list of vendors for recycling electrical equipment to be discarded.

USEFUL TIP

Dielectric fluid with concentrations of PCBs below 2 ppm are considered to have no PCBs, and could be managed and disposed as used oil (see Section 3.4.3).

How to deal with sealed electrical equipment

Sealed electrical equipment, such as capacitors, must be assumed to be PCB equipment unless they are specifically marked as non-PCB. Disposal of PCB items is discussed in Chapter 2 (Section 2.4.8). If they are specifically marked non-PCB, larger sealed items to be discarded should be drained, and the waste dielectric fluid and carcass disposed as discussed above. Non-PCB ballasts and small capacitors may be disposed as municipal solid waste. It is recommended that non-leaking ballasts or capacitors are first packed with absorbent packing material and sealed in containers.

USEFUL TIP

Cooperatives should be aware that some State laws prohibit disposal of these items in a municipal solid waste landfill. EPA is planning to amend the rules to limit the number of ballasts which may be disposed of as municipal solid waste.

Even though they do not contain regulated levels of PCBs (see Chapter 2), cooperatives should always be aware that non-PCB electrical equipment may contain other materials that qualify as RCRA hazardous waste because of their flammability or toxicity. If your equipment contains such materials, they must be managed, transported and disposed as hazardous waste once discarded.

LQGs and SQGs must determine if used lamps are hazardous waste or assume they are.

3.4.9 Mercury Lamps

Fluorescent light tubes and high intensity discharge (HID) lamps contain mercury. Mercury is a RCRA characteristic hazardous waste because of the toxicity of

USEFUL TIP

CESQGs do not have to characterize their fluorescent or HID lamps prior to disposal. CESQGs may dispose of these wastes in municipal solid waste landfills.

mercury. In addition, HID lamps may contain small amounts of lead, which also is a RCRA characteristic waste for toxicity. Since fluorescent light tubes and HID lamps are not listed hazardous wastes, and they are not excluded from the definition of hazardous wastes, it is the responsibility as a small (SQGs) or large quantity generators (LQGs) to determine if their fluorescent and HID lamps are characteristically hazardous waste, by having them tested for toxicity (using the TCLP test). CESQGs are exempt from this requirement (see box). If you have no knowledge of the lamp contents and do not test used fluorescent and HID lamps and prove them non-hazardous, you should assume they are hazardous waste and dispose of them accordingly.

You must handle and store waste lamps as hazardous waste unless they are determined not to be

Prior to disposal, tubes and lamps should be handled and stored as hazardous waste unless the determination is made that the lamps are non-hazardous. If they are non-hazardous, they can be disposed in any municipal solid waste landfill. If the lamps are hazardous they must be disposed in a hazardous waste landfill, or recycled. There are a number of facilities that will recycle fluorescent tubes and HID lamps. A list of these facilities can be found in Section 3.5.

POLLUTION PREVENTION TIP

Low mercury fluorescent lamps are manufactured by several companies. Use of these lamps could substantially reduce the potential for your waste fluorescent or HID lamps to be determined to be hazardous waste.

3.4.10 Leftover Paint

Leftover paint to be discarded is a reusable resource and should not necessarily be considered a waste product. There are a number of options for reusing leftover paint, including donating the paint (see box), or recycling it (see below). Keep in mind that waste paint may be considered a hazardous waste, and managed accordingly. To avoid having leftover paint, you should always buy paint to be used at your cooperative in the appropriate quantity, store it properly, and use it up or donate or exchange it before disposal or recycling is even considered.

USEFUL TIP - DONATING LEFTOVER PAINT

Left-over paint can be given to someone who has a need for the product. Contact local recreation departments, community service organizations, churches, schools, or theater groups. Many of these groups are pleased to accept “free” paint. Be sure that the paint you donate is in its original container with the label intact.

Usable latex (water-based) paint that you no longer need can either be donated (see box) or recycled (see below). Usable or unusable latex paint also can be disposed. Latex paints are not hazardous substances

and waste latex paint usually is not hazardous waste, but it is solid waste. To dispose of leftover latex paint, simply remove the lid and allow the paint to solidify completely in the can, then dispose of the paint and can in a solid waste landfill.

Oil- or solvent-based paints (also known as alkyd paints) have the potential to be hazardous waste when discarded. Review the MSDS for the paint, or the list of ingredients. If the paint can be considered to meet a hazardous waste characteristic, because of toxicity, flash point, etc. (this may be indicated on the MSDS) the waste paint should be managed and disposed as hazardous waste. If you have oil-based paint that is still usable, you can avoid the burden of managing, preparing for transport and disposing of it by donating it to someone (see box) or using it up completely (add another coat of paint to items you are painting). You can provide waste oil-based paint for use in fuel blending for waste-to-energy programs, but you will still have to store it as a hazardous waste, and transport it to the facility for blending. Waste-to-energy programs blend leftover solvent-based paint for use as fuel in cement kilns.

Reusing thinners or solvents

Paint thinners, or solvents can be reused by following a few simple steps. Allow the used solvent to sit in a closed container until the paint particles/residue settle out. Then pour off the clear liquid, which can be reused. The settled residue usually must be disposed as hazardous waste.

Recycling Used Paint

There are a number of options for recycling paint, mostly for latex paints. Solvent-based paint recycling is less common because of the complexity of the paint materials and the high cost of handling and recycling the paint compared to other alternatives, such as waste-to-energy programs. However, some companies recycle leftover solvent-based paints for resale as military gray for the naval ship fleet.

USEFUL TIP –
REUSING/RECYCLING PAINT

The National Paint and Coatings Association (NPCA) can provide you with information on reusing or recycling paint. You can find them on the internet at www.paint.org.

Typically, recycling latex paint can include:

- ***Paint Blending for Reuse***—This is a low-tech approach where leftover latex paint is blended with virgin materials to yield a new paint with a recycled content. Leftover paint makes up about

10–20 percent of the finished product. The resulting latex paint is generally intended for exterior use for anti-graffiti purposes.

- ***Paint Reprocessing***—This high-tech recycling typically requires careful quality control, and involves only latex paint.

Keep in mind, that unless you know it is not hazardous, waste oil-based paint destined for recycling still must be stored as hazardous waste at your cooperative, and transported as hazardous waste to the recycling facility. The exception to this case is if the paint is to be reprocessed. In this instance, the paint is still considered a product, not a waste, and therefore RCRA regulations do not apply to it.

3.4.11 Used Aerosol Cans

Aerosol sprays contain an active ingredient and a liquid or gaseous propellant that is packed under at least 40 pounds per square inch of pressure. These pressurized aerosol containers are explosive and may be flammable. The actual product propelled from the container can have a hazardous characteristic such as corrosiveness, toxicity, ignitability, etc.

It is the responsibility of the generator to determine if a waste aerosol can to be disposed is hazardous waste, and to recycle or dispose of it properly. Proper management of aerosol cans depends on the condition the can is in when it is to be disposed. Sometimes aerosol cans must be discarded before they are completely empty. A variety of reasons cause this to occur, including the spray mechanism no longer working as designed, or the propellant becomes spent before the product is completely used up. The following are criteria for helping you to determine whether your waste aerosol can is hazardous waste:

How to determine if your waste aerosol can is hazardous waste

- Any aerosol can that is completely emptied (i.e., does not contain propellant or product and is at atmospheric pressure) is not regulated as hazardous waste, even if it contained hazardous substances. Atmospheric pressure can be achieved by discharging all propellant.

- Any can that did not or does not contain any hazardous constituents that would be a listed or characteristic hazardous waste is not regulated as hazardous waste, regardless of whether it is emptied.

- Any can that did contain or does contain hazardous constituents that would be a listed or characteristic hazardous waste is subject to RCRA regulations unless the can is considered emptied. Some states allow you to puncture a partially emptied can and remove the constituents. If the constituents are hazardous, they must be managed as hazardous waste, but the can need not be. Check with your state to determine if they allow you to puncture your aerosol cans and dispose of the contents separately from the can. If you do puncture your aerosol can for this purpose, use extreme care. Some cans, especially those containing explosive products may explode when punctured.

USEFUL TIP

Some states consider waste aerosol cans to be universal waste. Check with your state to determine if this is the case, and what the universal waste regulations are for your state.

Disposal of non-hazardous waste aerosol cans

Waste aerosol cans that are not considered hazardous waste may be recycled as scrap metal, or landfilled. If a waste aerosol can contains hazardous waste, unless it can be considered universal waste by your state (see box) the can must be managed in full compliance with waste regulations, including storage, labeling and manifesting requirements discussed in Section 3.3, and Chapter 4).

WASTE MINIMIZATION TIP

Some types of aerosol cans can be refilled. For information on such cans, contact the vendors listed in Section 3.5.

3.4.12 Pole Yards/Pole Disposal

Currently, used arsenically-treated wood utility poles are exempt from the definition of RCRA hazardous waste. The regulations are less specific about used wood utility poles treated with creosote or pentachlorophenol (PCP). Typically, the creosote or PCP concentrations in waste wood are not high enough for the used wood utility poles to fail the TCLP, and the used poles are not considered hazardous waste. However, some states may have regulations that have more stringent limits on the concentrations of wood preservatives acceptable in utility poles to be disposed. You should check with your state to learn the acceptable concentration limits of wood preservatives in utility poles.

According to RCRA, you can dispose of used poles that have been arsenically-treated as solid waste in a municipal landfill. Utility poles that are disposed as hazardous waste must be managed and transported according to the regulations in Section 3.3 and Chapter 4. Many farmers

and ranchers want used utility poles. This is an acceptable form of recycling.

3.4.13 Management of Spill Cleanup Materials and Contaminated Media

If a listed hazardous waste is leaked, spilled or discharged to soil or water, the soil or water must be managed a hazardous waste as long as it "contains" the waste. EPA or your state sets the criteria for when soil or water no longer contains a listed waste. If a characteristic hazardous waste is leaked, spilled or discharged to soil or water, the soil or water must be managed a hazardous waste as long as it displays the hazardous characteristic. If the contaminated soil does not have the characteristic, and does not meet any other hazardous waste criteria, it would be considered soil and not waste. Close cooperation with your state agency is essential in these cases.

In general, if the material leaked, spilled or discharged is hazardous waste, the materials used to cleanup the spill will be hazardous waste, and must be managed and disposed as such. You can determine whether the material spilled is hazardous waste from the MSDS. If the MSDS for the material is not available, you must either use process knowledge of the material, or have the cleanup material tested for hazardous waste characteristics. If the material spilled is not hazardous, the cleanup material also will not be hazardous waste.

3.5 RESOURCES

3.5.1 References

Colorado Department of Public Health and Environment. *Management of Waste Aerosol Cans*. Hazardous Materials & Waste Management Division, Compliance Bulletin Hazardous Waste.

North Carolina Department of Environment, Health, and Natural Resources. *Management of Aerosol Cans for Businesses and Industries*. Waste Reduction Fact Sheet. North Carolina Division of Pollution Prevention and Environmental Assistance.

NRECA, 1987. *Guide for Disposal of Hazardous Substances*.

U.S. EPA. 1993. *Fluorescent Lamp Disposal*. Office of Air and Radiation. EPA 430-F-93-002.

U.S. EPA. 1994. *Lighting Waste Disposal*. EPA's Green Lights Program. January, 1994.

U.S. EPA, 1996. *Understanding the Hazardous Waste Rules – A Handbook for Small Businesses – 1996 Update*. Office of Solid Waste. Available online at http://www.epa.gov/epaoswer/hazwaste/aqg/handbook/sqg_bk. txt

U.S. EPA. *The Universal Waste Rule*. A fact sheet on the Universal Waste Rule. Available online at http://www.epa.gov/epaoswer/hazwaste/id/ univwast.htm

3.5.2 Internet Resources and Hotlines

USEPA RCRA Hotline: (800) 424-9346
Staff will answer questions on RCRA regulations in complete confidence.

PRO-ACT: http://www.afcee.brooks.af.mil/pro_act/main
This site provides a series of a pollution prevention fact sheets developed by the U.S. Air Force staff at Brooks AFB.

U.S. EPA Home Page: http://www.epa.gov
This site provides access to information on all EPA programs and offices. The Office of Solid Waste (OSW) is the source for information on RCRA requirements.

"Enviro$ense" Home Page: http://es.inel.gov
This site is part of EPA's internet site. If you can not access it directly at the address above, you can access it from the EPA home page by clicking on "Other Resources" and then "Bulletin Board Systems." The "Enviro$ense" site was established in an attempt to provide a single repository for pollution prevention, compliance assurance, and enforcement information and data bases. Included are pollution prevention case studies, technologies, points of contact, environmental statutes, executive orders, regulations, and compliance and enforcement policies and guidelines.

3.5.3 Waste Determination Guide

Table 3-3 lists typical waste characterization. Where not otherwise specified, nonhazardous solid waste may be disposed in a RCRA-approved landfill (typically a municipal or commercial landfill), or recycled.

Table 3-3. Waste Determination Guide

Waste Stream	Typical Category Prior to Disposal if Not Mixed with Other Hazardous Waste	If Not Mixed and Disposed in Landfill	If Not Mixed and Recycled
Used Oil	Used Oil	Depends on characterization	Used Oil

Used Oil Filters	Nonhazardous Solid Waste **If Completely Drained**	Nonhazardous Solid Waste **If Completely Drained**	Used Oil - If Not Drained
Used Transmission Fluid	Used Oil	Depends on characterization	Used Oil
Used Brake Fluid	Used Oil	Depends on characterization	Used Oil
Used Antifreeze	Depends on Characterization	Depends on Characterization	Depends on Characterization
Spent Listed Solvents	Hazardous Waste	Hazardous Waste	Hazardous Waste
Spent Citrus Solvents	Depends on characterization	Depends on characterization	Depends on characterization
Lead Acid Automotive Batteries	Not a Solid Waste If Returned to Supplier	Hazardous Waste	Hazardous Waste/ Universal Waste
Shop Rags Used for Oil	Used Oil	Depends on characterization	Used Oil
Shop Rags Used for Listed Solvent or Gasoline Spills	Hazardous Waste	Hazardous Waste	Hazardous Waste
Oil Spill Absorbent Material	Used Oil	Depends on Characterization	Used Oil
Spill Material for Listed Solvent and Gasoline	Hazardous Waste	Hazardous Waste	Hazardous Waste
Spilled or Unusable Paints and Thinners	Hazardous Waste	Hazardous Waste	Hazardous Waste
Used Tires	Nonhazardous Solid Waste	Nonhazardous Solid Waste	Nonhazardous Solid Waste

3.5.4 RCRA Hazardous Waste Landfills and Recycling Centers for Fluorescent Light Tubes

The following are commercially permitted hazardous waste landfills operating as of October 1991:

Name	Address	Telephone
CESOS International	P.O. Box 340 LPO Niagara Falls, NY 14302	(716) 282-2676
CESOS International	5092 Aber Road Williamsburg, OH 45176	(513) 720-6114
Chemical Waste Management	Box 55 Emelle, AL 35459	(205) 652-9721
Chemical Waste Management	Box 471 Kettleman City, CA 93239	(209) 386-9711
Chem-Security Systems Incorporated	Star Route, Box 9 Arlington, OR 98712	(503) 454-2643
CWM Chemical Services Control, Inc.	Box 200 Knolls, UT 84074	(716) 754-8231
Envirosafe Services Inc. Of Idaho	P.O. Box 16217 Boise, ID 83715-6217	(800) 274-1516

U.S. Ecology, Inc.	Box 578 Beatty, NV 89003	(702) 553-2203
U.S. Pollution Control, Inc. Grayback Mountain	8960N Hwy 40 Lake Point, UT 84074	(801) 534-0054
Lamp Recycling Services		
Lighting Resources, Inc.	Pomona, CA	(714) 622-0881
Mercury Technologies Corporation	San Rafael, CA	(415) 499-1000
Mercury Recovery System	Monrovia, CA	(818) 301-1372
Nine West Technologies	Newark, NJ 07102	(201) 623-0007
Quick Silver Products, Inc.	Brisbane, CA	(415) 468-2000

Companies listed in this section are not endorsed by the EPA or the Green Lights Program. EPA does not screen listed companies and cannot confirm the methods these may use in their recycling process.